ABSTRACT OF THE INVENTION

A specific clinical protocol for use toward therapy of defective, diseased and damaged cholinergic neurons in the mammalian brain, of particular usefulness for treatment of neurodegenerative conditions such as Alzheimer's disease. The protocol is practiced by delivering a definite concentration of recombinant neurotrophin into, or within close proximity of, identified defective, diseased or damaged brain cells. Using a viral vector, the concentration of neurotrophin delivered as part of a neurotrophic composition varies from 10^{10} to 10^{15} neurotrophin encoding viral particles/ml of composition fluid. Each delivery site receives from 2.5 µl to 25 µl of neurotrophic composition, delivered slowly, as in over a period of time ranging upwards of 10 minutes/delivery site. Each delivery site is at, or within 500 µm of, a targeted cell, and no more than about 10 mm from another delivery site. Stable *in situ* neurotrophin expression can be achieved for 12 months, or longer.